

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (withdrawn) An exposure device comprising:

a stage for placing a light transmissive substrate over which a photosensitive film is formed;

a light source for irradiating said photosensitive film from a back side of said light transmissive substrate; and

a reflecting means being opposite to a front side having said photosensitive film of said light transmissive substrate and apart from said photosensitive film by a predetermined distance.

2. (withdrawn) A device according to claim 1, wherein said reflecting means is a substrate on which a film comprising a reflective material is formed.

3. (withdrawn) A device according to claim 1, wherein said photosensitive film is a photoresist film.

4. (withdrawn) A device according to claim 1, wherein said photosensitive film is formed over a pattern comprising a light-shielding film.

5. (withdrawn) An exposure method comprising steps of:

forming a pattern comprising a light-shielding film over a front side of a light transmissive

substrate;

forming a photosensitive film over said pattern;

preparing a reflecting means located opposite to said photosensitive film;

prepare a light source for emitting a light; and

exposing said photosensitive film by irradiating it from a back side of said substrate with said light emitted from said light source while using said pattern as a mask wherein a reflecting means reflects a light passing through said photosensitive film, thereby said photosensitive film is irradiated from the front side of said substrate with the light and is exposed.

6. (withdrawn) An exposure method comprising steps of:

forming a pattern comprising a light-shielding film over a front side of a light transmissive substrate;

forming a photosensitive film over said pattern; and

exposing said photosensitive film by irradiating it from a back side of said substrate with light emitted from a light source while using said pattern as a mask, and reflecting or scattering by a reflecting means, which is opposite to said front side of said substrate, the light from the light source which has penetrated through said photosensitive film, so that said photosensitive film is irradiated from the front side of said substrate with the light and is exposed.

7. (withdrawn) A method as claimed in claim 6, wherein a shape of the photosensitive film formed over said pattern corresponds to a reduced shape of said pattern comprising the light-shielding film.

8. (currently amended) A method ~~for~~ of manufacturing a semiconductor device comprising steps of:

forming a gate electrode over a front side of a substrate;

forming a semiconductor film over said gate electrode with a gate insulating film interposed therebetween;

forming a photosensitive film over said semiconductor film;

providing a reflecting plate apart from a surface of said photosensitive film by a predetermined distance;

providing a light source for emitting a light adjacent to a back side of said substrate; and

exposing said photosensitive film by irradiating it from a the back side of said substrate with said light emitted from said light source using said gate electrode as a mask and said reflecting plate for reflecting said light having penetrated through said photosensitive film thereby said photosensitive film is irradiated from said front side of said substrate with the light.

9. (currently amended) A The method according to claim 8, wherein said semiconductor device is one selected from the group consisting of a video camera, a digital camera, a head mount display, a goggle type display, an wearable display, a navigation system for vehicles, a personal computer, a portable information terminal, a mobile computer, a cellular phone, and an electronic book ~~and comprises an EL display device.~~

10. (currently amended) A method of manufacturing a semiconductor device, comprising steps of:

forming a pattern comprising a light-shielding film over a front side of a light transmissive substrate;

forming a photosensitive film over said pattern;

providing a light source for emitting a light adjacent to a back side of said light transmissive substrate;

reflecting or scattering by a reflecting means, ~~which is opposite to said front side of said substrate,~~ the light from a ~~the~~ light source which has penetrated through said photosensitive film, and thereby irradiating said photosensitive film with the light from the front side of said light transmissive substrate to expose the photosensitive film; and

developing the ~~exposed~~ photosensitive film.

11. (currently amended) A ~~The~~ method according to claim 10, wherein said semiconductor device is one selected from the group consisting of a video camera, a digital camera, a head mount display, ~~a~~ goggle type display, an wearable display, a navigation system for vehicles, a personal computer, a portable information terminal, a mobile computer, a cellular phone, and an electronic book ~~and comprises an EL display device.~~

12. (currently amended) A method of manufacturing a semiconductor device, comprising steps of:

forming a pattern comprising a light-shielding film over a front side of a light transmissive substrate;

forming a photosensitive film over said pattern;

providing a light source for emitting a light adjacent to a back side of said light transmissive substrate;

exposing said photosensitive film by irradiating it from a the back side of said light transmissive substrate with the light emitted from a the light source; while using said pattern as a mask;

reflecting or scattering by a reflecting means, ~~which is opposite to said front side of said substrate;~~ the light from the light source which has penetrated through said photosensitive film, so that said photosensitive film is irradiated from the front side of said light transmissive substrate with the light and is exposed; and

developing the ~~exposed~~ photosensitive film.

13. (currently amended) A The method according to claim 12, wherein said semiconductor device is one selected from the group consisting of a video camera, a digital camera, a head mount display, a goggle type display, an wearable display, a navigation system for vehicles, a personal computer, a portable information terminal, a mobile computer, a cellular phone, and an electronic book ~~and comprises an EL display device.~~

14. (currently amended) A method of manufacturing a semiconductor device, comprising steps of:

forming a gate wiring over a front side of a light transmissive substrate;

forming a gate insulating film on said gate wiring;

forming a semiconductor film on said gate insulating film;

forming a photosensitive film over said semiconductor film;

providing a light source for emitting a light adjacent to a back side of said light transmissive substrate;

exposing said photosensitive film by irradiating it from a the back side of said light transmissive substrate with the light emitted from a light source while using said gate wiring as a first mask; and

reflecting or scattering by a reflecting means, ~~which is opposite to said front side of said substrate,~~ the light from the light source, which has penetrated through said photosensitive film, so that said photosensitive film is irradiated from the front side of said light transmissive substrate with the light and is exposed;

removing an exposed part of the photosensitive film to form a pattern comprising the photosensitive film; and

doping said semiconductor film with ~~a dopant~~ dopants for imparting a conductivity using ~~as a mask~~ said pattern comprising the photosensitive film as a second mask.

15. (currently amended) A The method according to claim 14, wherein said semiconductor device is one selected from the group consisting of a video camera, a digital camera, a head mount display, a goggle type display, an wearable display, a navigation system for vehicles, a personal computer, a portable information terminal, a mobile computer, a cellular phone, and an electronic book ~~and comprises an EL display device.~~

16. (currently amended) A method of manufacturing a semiconductor device, comprising steps of:

forming a gate wiring over a front side of a light transmissive substrate;

forming a gate insulating film on said gate wiring;

forming a semiconductor film on said gate insulating film;

forming an insulating film on said semiconductor film;

forming a photosensitive film on said insulating film;

providing a light source for emitting a light adjacent to a back side of said light transmissive substrate;

exposing said photosensitive film by irradiating it from a the back side of said light transmissive substrate with the light emitted from a the light source while using said gate wiring as a first mask; ~~and;~~

reflecting or scattering by a reflecting means, ~~which is opposite to said front side of said substrate,~~ the light from the light source which has penetrated through said photosensitive film, so that said photosensitive film is irradiated from the front side of said light transmissive substrate with the light and is exposed;

removing an exposed part of the photosensitive film to form a first pattern comprising the photosensitive film;

selectively removing said insulating film using said first pattern as a second mask to form a second pattern comprising said insulating film;

removing said first pattern comprising the photosensitive film; and

doping said semiconductor film with ~~a dopant~~ dopants for imparting a conductivity using ~~as a mask~~ said second pattern comprising the insulating film as a third mask.

17. (currently amended) A The method according to claim 16, wherein said ~~second~~ first pattern is small in size as compared to said gate wiring pattern, ~~and is larger than said first pattern.~~

18.(currently amended) A The method according to claim 16, wherein the shape of said first pattern comprising the photosensitive film corresponds to a reduced shape of said gate wiring pattern.

19. (currently amended) A The method according to claim 16, wherein said reflecting means is a reflecting plate on which a film comprising a reflective material is formed.

20. (currently amended) A The method according to claim 16, wherein said insulating film ~~is a layer~~ contains at least one selected from the group consisting of a silicon nitride film, a silicon oxide nitride film, a silicon oxide film and an organic resin film, ~~and a laminated film of these.~~

21. (currently amended) A The method according to claim 16, wherein said semiconductor device is one selected from the group consisting of a video camera, a digital camera, a head mount display, a goggle type display, an wearable display, a navigation system for vehicles, a personal computer, a portable information terminal, a mobile computer, a cellular phone, and an electronic book ~~and comprises an EL display device.~~

22. (currently amended) A method of manufacturing a semiconductor device, comprising steps of:

forming a gate wiring over a front side of a light transmissive substrate;

forming a gate insulating film on said gate wiring;

forming a semiconductor film on said gate insulating film;

forming an insulating film on said semiconductor film;

forming a photosensitive film on said insulating film;

providing a light source for emitting a light adjacent to a back side of said light transmissive substrate;

exposing said photosensitive film by irradiating it from a the back side of said light transmissive substrate with the light emitted from a the light source while using said gate wiring as a first mask, and;

reflecting or scattering by a reflecting means, ~~which is opposite to said front side of said substrate,~~ the light from the light source which has penetrated through said photosensitive film, so that said photosensitive film is irradiated from the front side of said light transmissive substrate with the light and is exposed;

removing an exposed part of the photosensitive film to form a first pattern comprising the photosensitive film;

selectively removing said insulating film using said first pattern as a second mask to form a second pattern comprising said insulating film;

removing said first pattern comprising the photosensitive film; and

doping said semiconductor film with ~~a dopant~~ dopants for imparting a conductivity using ~~as a mask~~ said second pattern comprising the insulating film as a third mask.

23. (currently amended) A The method according to claim 22, wherein said ~~second~~ first pattern is small in size as compared to said gate wiring pattern, ~~and is larger than said first pattern.~~

24. (currently amended) A The method according to claim 22, wherein the shape of said first pattern comprising the photosensitive film corresponds to a reduced shape of said gate wiring pattern.

25. (currently amended) A The method according to claim 22, wherein said reflecting means is a reflecting plate on which a film comprising a reflective material is formed.

26. (currently amended) A The method according to claim 22, wherein said insulating film ~~is a layer~~ contains at least one selected from the group consisting of a silicon nitride film, a silicon oxide nitride film, a silicon oxide film and an organic resin film, ~~and a laminated film of these.~~

27. (currently amended) A The method according to claim 22, wherein said semiconductor device is one selected from the group consisting of a video camera, a digital camera, a head mount display, a goggle type display, an wearable display, a navigation system for vehicles, a personal computer, a portable information terminal, a mobile computer, a cellular phone, and an electronic book ~~and comprises an EL display device.~~

28. (currently amended) A method of manufacturing a semiconductor device, comprising steps of:

forming a gate wiring over a front side of a light transmissive substrate;
forming a gate insulating film on said gate wiring;
forming a semiconductor film on said gate insulating film;
forming an insulating film on said semiconductor film;
forming a first photosensitive film on said insulating film;
providing a light source for emitting lights adjacent to a back side of said light transmissive substrate;

exposing said first photosensitive film by irradiating it from a the back side of said light transmissive substrate with a first light emitted from a the light source while using said gate wiring as a first mask, ~~and;~~

reflecting or scattering by a first reflecting means, ~~which is opposite to said front side of said substrate,~~ the first light from the light source which has penetrated through said first photosensitive film, so that said first photosensitive film is irradiated with the first light from the front side of said light transmissive substrate and is exposed;

removing an exposed part the first photosensitive film to form a first pattern comprising the first photosensitive film;

selectively removing said insulating film while using said first pattern as a second mask to form a ~~first~~ second pattern comprising the insulating film;

removing said first pattern comprising said first photosensitive film;

forming a second photosensitive film;

exposing said second photosensitive film by irradiating it from the back side of said light transmissive substrate with a second light emitted from the light source while using said gate wiring as

a third mask, and;

reflecting or scattering by a second reflecting means, ~~which is opposite to the front side of said substrate~~, the second light from the light source which has penetrated through said second photosensitive film, so that said second photosensitive film is irradiated with the second light from the front side of said light transmissive substrate and is exposed;

removing an exposed part of the second photosensitive film to form a ~~second~~ third pattern comprising the second photosensitive film;

doping with a high concentration of ~~dopant~~ dopants for imparting conductivity while using ~~as masks~~ said first second pattern and said ~~second~~ third pattern as masks;

removing said ~~second~~ third pattern; and

doping a low concentration of ~~dopant~~ dopants for imparting conductivity while using as a ~~mask~~ said first second pattern as a fourth mask.

29. (currently amended) A The method according to claim 28, wherein said ~~second~~ third pattern is small in size as compared to said gate wiring ~~pattern~~, and is larger than said first pattern.

30. (currently amended) A The method according to claim 28, wherein the shape of said first pattern comprising the first photosensitive film corresponds to a reduced shape of said gate wiring ~~pattern~~.

31. (currently amended) A The method according to claim 28, wherein each of said first reflecting means and said second reflecting means is a reflecting plate on which a film comprising a

reflective material is formed.

32. (currently amended) A ~~The~~ method according to claim 28, wherein said insulating film ~~is a layer~~ contains at least one selected from the group consisting of a silicon nitride film, a silicon oxide nitride film, a silicon oxide film and an organic resin film, ~~and a laminated film of these.~~

33. (currently amended) A ~~The~~ method according to claim 28, wherein said semiconductor device is one selected from the group consisting of a video camera, a digital camera, a head mount display, a goggle type display, an wearable display, a navigation system for vehicles, a personal computer, a portable information terminal, a mobile computer, a cellular phone, and an electronic book ~~and comprises an EL display device.~~

34 (currently amended) A method of manufacturing a semiconductor device, comprising steps of:

forming a pattern comprising a light-shielding film over a front side of a light transmissive substrate;

forming a photosensitive film over said pattern;

providing a reflecting means ~~located~~ over the front side of said light transmissive substrate ~~to said photosensitive film;~~

providing a light source for emitting a light adjacent to the back side of said light transmissive substrate; and

exposing said photosensitive film by irradiating it from a the back side of said light

transmissive substrate with said light emitted from said light source while using said pattern as a mask,
wherein a said reflecting means reflects a said light passing through said photosensitive film, thereby said photosensitive film is irradiated from the front side of said light transmissive substrate with the light and is exposed.

34 35. (currently amended) A method of manufacturing a semiconductor device, comprising steps of:

forming a pattern comprising a light-shielding film over a front side of a light transmissive substrate;

forming a photosensitive film over said pattern; ~~and~~

providing a light source for emitting a light adjacent to the back side of said light transmissive substrate;

exposing said photosensitive film by irradiating it from a the back side of said light transmissive substrate with the light emitted from a the light source while using said pattern as a mask;;
and

reflecting or scattering by a reflecting means, ~~which is opposite to said front side of said substrate,~~ the light from the light source which has penetrated through said photosensitive film, so that said photosensitive film is irradiated from the front side of said light transmissive substrate with the light and is exposed.

36. (currently amended) A The method according to claim 35, wherein a shape of the photosensitive film formed over said pattern corresponds to a reduced shape of said pattern comprising

the light-shielding film.